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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,376	01/26/2001	Nobuyoshi Yagi	Q62053	5759
7590	07/28/2004		EXAMINER	
SUGHRIUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037			DICUS, TAMRA	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/769,376	YAGI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tamra L. Dicus	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 07 May 2004.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

The Examiner withdraws the 112 rejection over claim 3 due to Applicant's arguments supported by the specification. Thus, the rejection below will be considered a non-final rejection.

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 and 4-5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,500,518 to Sugawa et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims differ only in the recitation of the surface roughness values of 0.8 nm and 0.2 nm or lower is an obvious limitation as '518 to Sugawa provides in patented claim 1 the limitation that claims a smooth surface. While the roughness value of 0.8 nm is not claimed, but is considered inherent since the same epoxy resin is used in the same manner. Further at col. 3, line 40, a surface roughness value is taught within the range of 0.2 micrometers or less, falling within Applicant's range of 0.8 nm and 0.2 nm or lower. The sheet of Sugawa is a functional equivalent to a "cell substrate" because the same materials are

provided and the use of such substrate as a “cell substrate” affords no patentable weight as it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Further at col. 7, lines 1-10, the substrate can be used for liquid crystal cell substrates.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,500,518 to Sugawa et al.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Sugawa an epoxy optical sheet having a thickness of 500 micrometers or less (falling within Applicant’s range of an average thickness of from 100 to 800 and 200 to 500

micrometers of instant claims 1 and 5). The sheet is epoxy (8), is a multilayer structure, and has a smooth surface such as a roughness Ra of 0.02 micrometers or less (meeting Applicant's range of 0.8 and 0.2 nm or lower of instant claims 1 and 4). See col. 3, ll 1-8, ll 30-68, col. 4, ll 3-45. The epoxy resin includes specific resins such as bisphenol A at col. 4, ll 47-50 (to instant claim 6). A layer of a cured epoxy resin as a base layer is also provided (see (62) of Figure 1 and col. 2, 142). The sheet of Sugawa is a functional equivalent to a "cell substrate" because the same materials are provided and the use of such substrate as a "cell substrate" affords no patentable weight as it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Further at col. 7, lines 1-10, the substrate can be used for liquid crystal cell substrates.

Regarding claim 3, Sugawa further teaches the epoxy resin layer can be laminated by coating over a gas barrier of PVA resin and forming the PVA gas barrier on a urethane resin layer. The urethane resin layer is hardened by light irradiation e.g. UV lamp (col. 4, line 31-32) (equivalent to transparent hard coat layer). Such description forms the multilayer structure of instant claim 3. The thickness of each resin layer discussed above is disclosed at col. 4, line 39, teaching a range from 1 to 10 micrometers, falling within Applicant's range of 0.1 micrometers or larger.

4. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,136,444 to Kon et al.

5. Kon teaches a multilayer resinous structure having a transparent plastic substrate of a thickness between 70 and 200 micrometers at col. 17, ll 55-64 (falling within Applicant's range of an average thickness of from 100 to 800 and 200 to 500 micrometers of instant claims 1 and 5). The transparent plastic substrate has a surface roughness Ra of 1 nm or less at col. 18, ll 35-43 (meeting Applicant's range of 0.8 and 0.2 nm or lower of instant claims 1 and 4). Regarding instant claim 2, a base cured epoxy layer is also taught by Kon as layer (7) as a solvent-resistant radiation curing layer see Example 4-col.28, lines 36-38. See also col. 20, ll 30-50 providing for the structure including various multilayer components. The sheet of Kon is a functional equivalent to a "cell substrate" because the same materials are provided and the use of such substrate as a "cell substrate" affords no patentable weight as it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Further Kon teaches the invention used in liquid crystal displays just as Applicant describes a "cell substrate" to be used (page 12, 1<sup>st</sup> complete paragraph). To claim 3, a PVA based gas barrier (4) is disclosed in Figure 4 between epoxy (8) and transparent polycarbonate (1) (transparent hard coat). Polycarbonate (1) is heated, includes bisphenol A, and is between 70-20 microns thick, thereby producing a hard layer. See col. 18, lines 5-10 and 20-26. The thickness of (1) is between 70 and 200 microns, falling within applicant's range of 0.1 microns or larger at col. 20, lines 30-40 also. The Ra surface roughness of (1) is 1 nm or less on the air side (also falling within Applicant's range of 0.8 nm or lower on one side) at col. 18, line 37.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,136,444 to Kon et al. in view of USPN 6,261,664 to Beeson et al.

Kon is relied upon above. Kon does not teach an epoxy of bisphenol A type. The invention of Beeson is directed to an optical light diffusion multilayered transparent support. At col. 4, ll 59-60, Beeson teaches a uniform (average) thickness of 0.2 to 2 mm, within the claimed range of 100 to 800 micrometers. The photopolymerizable material layer is of cured epoxy deposited on a substrate, where the epoxy is deemed equivalent to Applicant's base layer as the epoxy layer of Beeson is an outermost layer as well. See col. 3, ll 50-60, col. 4, ll 12-25, and Figures 1-2. Both Kon and Beeson are involved in the same technical field such as optical films, thereby providing a *prima facie* case of obviousness. It would have been obvious to one of ordinary skill in the art to include a bisphenol epoxy because Beeson teaches it is conventional to use in optical films as cited above.

***Response to Arguments***

8. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments have been fully considered but they are not persuasive. Applicant argues Sugawa does not teach the claimed range of 0.8 nm or lower and argues Sugawa does not measure the surface roughness. Applicant points to the teaching of 0.02 micrometers or less achieving a "smooth" surface but argues this teaching is significantly different from 0.8 nm or lower because Applicant alleges the claimed range is lower despite the use of epoxy. The Examiner upholds the Double Patenting and 102(e) rejection over Sugawa because patented claim 1 teaches the same epoxy base, thickness range, and claims the sheet is smooth. "Smooth" is interpreted in light of the specification, which Applicant agrees is 0.02 micrometers or less explicitly taught at col. 3, lines 40-41 equating the roughness to the smoothness of a mirror. This range is encompassed by Applicant's claimed range. Applicant has not claimed a "much narrower" claimed range as alleged. Applicant has amended the present claims to a "cell substrate" and argues this name is to the use of the claimed substrate as a liquid crystal cell substrate and points to Examples within the Specification. However, this new name does not differentiate from the Prior Art of record because the same materials, roughness values, and thicknesses are provided for. According to Applicant's disclosure, Applicant describes the resinous substrate can be used according to the intended use as a "cell substrate" (page 12, 1<sup>st</sup> complete paragraph). That the substrate is used in a liquid crystal display does not afford any patentable weight as use of a disclosed invention is not different because it is used in a new/different way. It has been held that a recitation with respect to the

manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Moreover, Applicant has not claimed a liquid cell in any of the claims, but is free to do so if supported by original disclosure. However, both Sugawa and Kon clearly teach the use of the resinous substrate as a liquid crystal display as aforementioned above. Kon is still used to teach the same structure, materials, thickness, and roughness properties as set forth above. Applicant argues the 103 over the use of "a cell substrate for optical use", alleging Kon and Beeson do not render obviousness in combination or alone. However, as set forth, Kon teaches the same materials, thickness and roughness properties as claimed (see Figure 4). Beeson is an optical structure just as Kon, and Beeson is merely used to teach bisphenol A is conventional to add. Applicant continues to argue the use but again, use of an article is not patentable because it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 4, 2004

Tamra L. Dicus  
Examiner  
AU 1774



BRUCE H. HESS  
PRIMARY EXAMINER